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Kenneth L Manders*, mandersk@pitt.edu. *On Proofs of the Quadratic Reciprocity Theorem*. Preliminary report.

Few mathematical results have drawn as many distinct proofs as Gauss' Quadratic Reciprocity theorem. It nonetheless remains mysterious, lying at the origin of extensions ranging from Gauss' work to the frontiers of contemporary number theory. Notably, it presents a simple case of regularities in the factorization of primes in algebraic number fields.

We will discuss several of the families of proofs in light of this connection. (Received September 15, 2017)